Attorney Docket No. 0630-1402P Reply to March 1, 2004 Office Action

Page 4

Amendments to the Claims

Claims 1-27 (Cancelled).

Application No.: 10/043,146

Art Unit: 3729

28. (Currently Amended) A hole plugging method for plugging holes in

a printed circuit board, comprising:

wherein filling a solder resist or insulating resin is filled in spaces between

surface side circuit patterns by moving a squeegee under the condition of being

abutted on an upper surface of a circuit pattern formed on the surface of a

printed circuit board and formed in the board and a hole for electrically

connecting the circuit pattern formed on the board and the circuit pattern formed

in the board or for connecting the circuit patterns on the both side surfaces and

by moving the squeegee wile being abutted to the surface of the printed circuit

board; and

filling the solder resist or insulating resin in the spaces among the surface

side circuit patterns to the same height as the upper surface of the circuit

patterns.

29. (Original) The method of claim 28, wherein the solder resist or

insulating resin is plugged into the hole by moving the squeegee under the

condition of being abutted on the upper surface of the hole.

Attorney Docket No. 0630-1402P Reply to March 1, 2004 Office Action

Page 5

Art Unit: 3729

Application No.: 10/043,146

30. The method of claim 28, comprising: (Original)

a first step of plugging the solder resist or insulating resin in one portion of

the hole by moving the squeegee under the condition of being abutted on the

upper surface of the hole; and

a second step of completely plugging the solder resist or insulating resin in

the whole portion of the whole by moving the squeegee under the condition of

being abutted on the upper surface of the hole.

The method of claim 30, wherein, in the second plugging 31. (Original)

step the solder resist or insulating resin is plugged in the hole by moving the

squeegee in the opposite direction to the moving directing of the squeegee in the

first plugging step.

The method of claim 30, wherein, in the second plugging 32. (Original)

step the solder resist or insulating resin is plugged in the hole by moving the

squeegee in the same direction to the moving directing of the squeegee in the first

plugging step.

33. The method of claim 28, wherein the solder resist or (Original)

insulating resin is coated only on an area exposed by a mask for selectively

Application No.: 10/043,146 Attorney Docket No. 0630-1402P
Art Unit: 3729 Reply to March 1, 2004 Office Action

Page 6

exposing the plurality of circuit patterns formed on the printed circuit board at a predetermined interval on the hole.

34 - 50. (Canceled)

51. (Currently Amended)) A plugging method for a printed circuit board having a plurality of first circuit patterns formed on a surface of the board,

wherein_filling a solder resist or insulting resin is filled in spaces between the first circuit patterns by moving a squeegee under the condition of being abutted on an upper surface of the first circuit patterns; and

plugging the solder resister or insulting resin into the via holes and/or the through holes by moving the squeegee under the condition of being abutted directly on the upper surface of the via holes and/or the through holes.

- 52. (Previously Presented) The method of claim 51, wherein the printed circuit board further includes one or more via holes formed to electrically connect between the first circuit patterns and a plurality of second circuit patterns formed inside the board, and/or one or more through holes formed to electrically interconnect both the upper and lower surface of the first circuit patterns.
 - 53. (Previously Presented) The method of claims 51, wherein the solder

Application No.: 10/043,146 Attorney Docket No. 0630-1402P
Art Unit: 3729 Reply to March 1, 2004 Office Action

Page 7

resist or insulating resin filled in the spaces among the surface side circuit patterns is filled to the same height as the upper surface of the first circuit patterns.

54. (Cancelled).

55. (Previously Presented) The method of claim 52, comprising the steps of:

a first step of plugging the solder resist or insulating resin in one portion of the via holes and/or the through holes; and

a second step of completely plugging the solder resister or insulating resin in the whole portion of the via holes and/or the through holes by moving the squeegee under the condition of being abutted on the surface of the via holes and/or the through holes.

- 56. (Previously Presented) The method of claim 55, wherein in the second plugging step the solder resist or insulting resin is plugged in the via holes and/or the through holes by moving the squeegee in the opposite direction to the moving direction of the squeegee in the first plugging step.
 - 57. (Previously Presented) The method of claim 55, wherein in the

Application No.: 10/043,146

Art Unit: 3729

Attorney Docket No. 0630-1402P Reply to March 1, 2004 Office Action

Page 8

second plugging step the solder resist or insulting resin is plugged in the hole by

moving the squeegee in the same direction to the moving direction of the squeegee

in the first plugging step.

58. (Previously Presented) The method of claim 52, wherein the solder

resist or insulating resin is coated only on an area exposed by a mask for

selectively exposing the first circuit patterns at a predetermined interval or on the

via holes and/or the through holes.

59. (Cancelled).